

DISCLOSURE OF THE INVENTION

However, results of experiments conducted by the inventors show that the stain of the ceramic products is a combination of a hydroxyl group present on the glazed surface with components of the human waste etc. and not the dried human waste etc. remaining on the glazed surface. The combination of the hydroxyl group with the components of the human waste etc. is made via dehydration or dehydrogenation between the hydroxyl and metal ion in water. Of such metal ions, soluble silica is particularly considered to be deposited as silicic acid with network structure or silicic scale and apt to incorporate stain.

According to results of investigation carried out by the inventors, service waters and mineral waters which are obtained from all over Japan and are generally considered to contain no stain actually each contain about 10 p.p.m. of soluble silica on the average as shown by p.p.m. in the following TABLES 1 to 4.

TABLE 1

No.	Classification	Maximum	Minimum	Average
1	Service water	23	12	16
2	Service water	17	12	15
3	Service water	16	12	14
4	Service water	20	18	19
5	Service water	25	18	21
6	Service water			16.4
7	Service water			38.7
8	Mineral water			42.7
9	Mineral water			24.7
10	Service water	19	15	17
11	Service water	18	15	17
12	Service water	24	19	22
13	Mineral Water	12.3	7.8	10.5
14	Mineral water			15.3
15	Service water			21
16	Service water			23
17	Service water			14

18	Service water	23
19	Service water	23
20	Service water	21
21	Service water	14
22	Service water	20
23	Service water	16

TABLE 2

No.	Classification	Maximum	Minimum	Average
24	Service water			20
25	Service water	17	9	12
26	Service water	17	9	12
27	Service water	26	24	25
28	Service water	22	19	20
29	Service water	21	13	18
30	Service water	20	15	16
31	Mineral water			32
32	Service water	30	25	27.5
33	Service water	29.3	24	26.7
34	Service water	28.1	21.7	25
35	Service water	24	20	21
36	Service water	22	16	20
37	Mineral water			28.7
38	Mineral water			26.9
39	Mineral water	15.7	11.5	13.6
40	Mineral water			21.9
41	Mineral water			5.6
42	Mineral water			16
43	Mineral water			21.4
44	Mineral water			15
45	Mineral water			35.1
46	Service water	11	10	11

TABLE 3

No.	Classification	Maximum	Minimum	Average
47	Service water	11	10	11
48	Service water	11	10	11
49	Service water	11	11	11
50	Mineral water			50.1
51	Service water			14
52	Service water			11.4
53	Mineral water			13.5
54	Mineral water			25
55	Mineral water			28.2
56	Mineral water			22.6
57	Mineral water			18.6
58	Mineral water			10.7

59	Service water	17.2	10.1	13.9
60	Service water	17	10.9	14.1
61	Service water	22	10	16
62	Service water	12	9	11
63	Mineral water			7.1
64	Service water	15.3	12.9	14.1
65	Service water	18.1	13.3	15
66	Service water	31	21.6	26
67	Service water	27	7.8	12.3
68	Service water	15.4	13.5	14.7
69	Service water	35.6	22.8	29.2

TABLE 4

No.	Classification	Maximum	Minimum	Average
70	Mineral water			54.2
71	Mineral water	67.2	52.2	64.2
72	Service water	59.3	55.3	57.2
73	Service water	62.6	57.4	59.4
74	Service water	56.4	51.2	53.2
75	Service water	56.6	53.4	54.7
76	Service water	57.8	53.1	54.9
77	Mineral water			43.4
78	Mineral water			55.9
79	Mineral water			50.3
80	Service water	108	11	62
81	Mineral water			5.3

The aforesaid ceramic product is used with water containing a large quantity of the metal ion such as soluble silica, stain such as human waste is apt to adhere to the ceramic product. It is difficult to clean the ceramic product.

The present invention has been made in view of the foregoing and an object thereof is to provide a ceramic product which is subjected to water in use and which has a high stain preventive effect and a method of stain resistant treatment applied to the ceramic product.

To solve the aforesaid problem, the present invention provides a ceramic product having a treated surface formed with a layer composed of a stain resistant agent, said agent including